

## **ADMINISTRATIVE NOTICE 98-04**

**SUBJECT:** Property Tax -- State Tax Commissioner's Statement for the Determination of Production Decline Rates for Producing Oil and Gas Properties for Property Tax Purposes for Tax Year 1998, Pursuant to § 110-1J-4.6.

On June 30, 1997, the State Tax Commission filed valuation variables to be used in conjunction with legislative regulations for the appraisal of oil and gas properties. (See: § 110 CSR 1J-1 et seq.) This notice will address one of the variables, the production decline rate(s), setting forth the procedures used in developing the rate(s) for tax year 1997.

### DISCUSSION

The income stream generated from a producing oil or gas well is directly dependent upon the quantity of the natural resource produced from the well. Once drilled an oil or gas well will experience a sharper production decline, typically for the first two (2) years of production. This is known as flush production. Thereafter production decline levels off into what is known as settled production. The rate of production decline is dependent upon the physical location of the well and the stratigraphic formation(s) from which the well is producing.

The West Virginia Geological and Economic Survey has in past years created a data base that contains well by well production data by producing formation(s). The Tax Commission contracted with the "Survey" to develop an analytical model to plot current production declines by location/formation throughout the State using the most recent data available.

The "Survey" has divided the State into ten (10) regions that contain similar oil and gas geological characteristics. Attachment I is a map of the State depicting each of these ten (10) regions. The regions were then analyzed by producing formation(s), and production decline curves were plotted [(see Attachment II for example) for each formation]. A complete list of the oil and gas decline rates can be found in the above referenced variables filed on June 30, 1997.

The appropriate production decline rate(s) were applied to individual well gross receipts to develop a probable future income series for the respective wells. The income streams from these wells are then discounted to present value. (See Administrative Notice 98-05).

For more information concerning the development of oil and gas well production decline rates contact the State Tax Commission at (304) 558-3940.

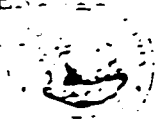
Issued: January 30, 1998

Rich Boyle  
State Tax Commissioner  
West Virginia State Tax Commission

State Tax Commission  
Property Tax Division  
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# WEST VIRGINIA GEOLOGICAL AND ECONOMIC SURVEY



State of West Virginia  
Gaston Caperton  
Governor

Department of Commerce, Labor,  
& Environmental Resources  
Leonard A. Harvey, Secretary

Geological and Economic Survey  
Larry D. Woodcock, Director  
Carl J. Smith, Deputy Director

## Central Region:

*Formation* = Big Lime

## Model

Decline from 1st to 2nd year	= .34	(# observations used = 78)
Decline from 2nd to 3rd year	= .34	(# observations used = 63)
Decline after 3rd year	= .13	(# observations used ranged from 37 to 53)

## Normalized Decline

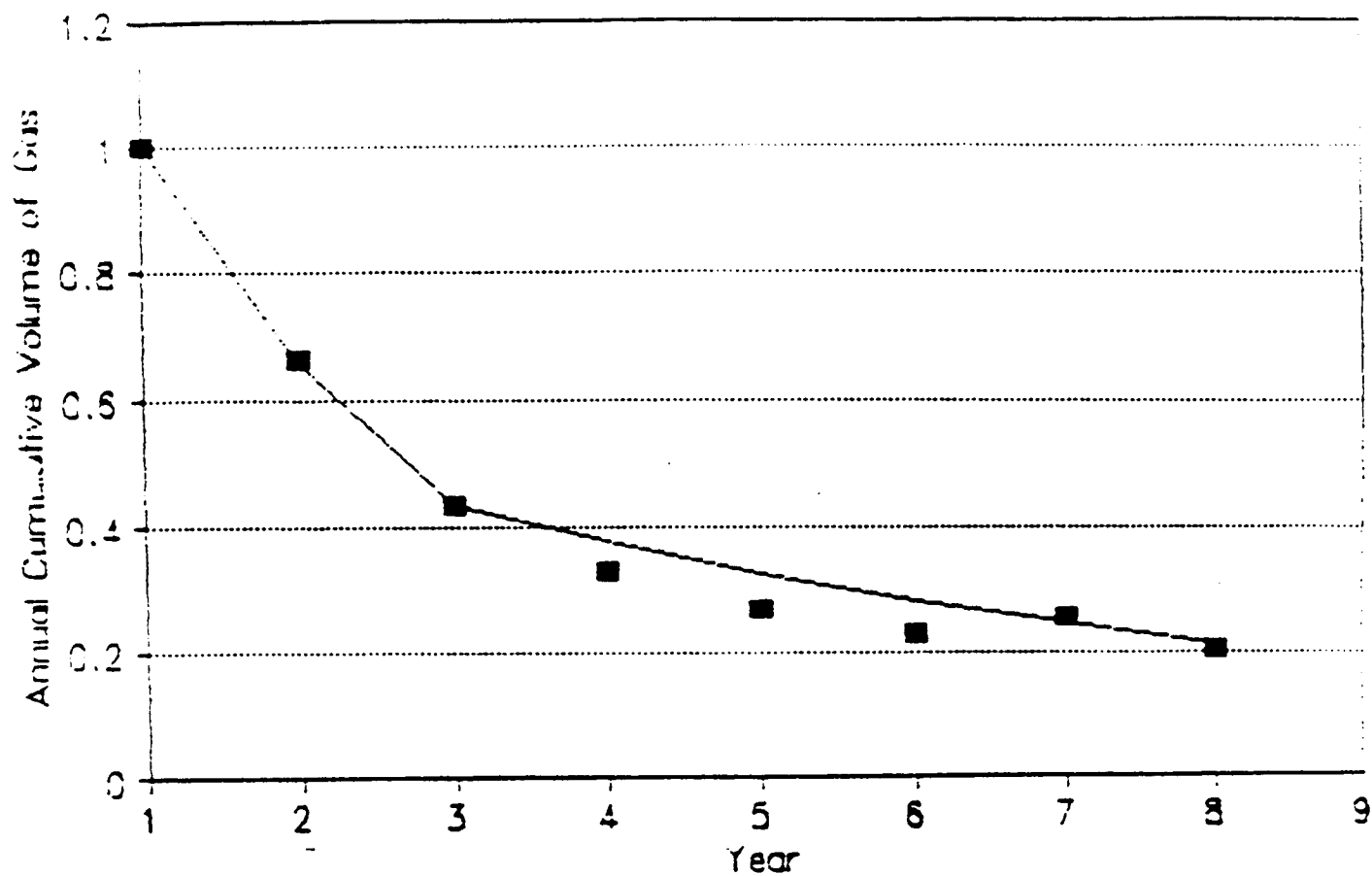
<u>Year</u>	<u>Observed</u>	<u>Model</u>
1	1.00	1.00
2	.66	.66
3	.43	.43
4	.33	.38
5	.27	.33
6	.23	.28
7	.26	.24
8	.20	.21

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# BIG LME



■ OBSERVED — FITTED